UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,576	10/09/2007	John G. Hildebrand	CCPC 0122 PUSA4	3052

50764   7590   12/07/2009
BROOKS KUSHMAN P.C.
1000 TOWN CENTER
TWENTY-SECOND FLOOR
SOUTHFIELD, MI 48075

EXAMINER
EKPO, NNENNA NGOZI

ART UNIT	PAPER NUMBER
2425	

MAIL DATE	DELIVERY MODE
12/07/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/597,576	HILDEBRAND ET AL.
	Examiner	Art Unit	
	NNENNA N. EKPO	2425	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *16 September 2009*.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-4,7-11 and 21-32* is/are pending in the application.

    4a) Of the above claim(s) *5,6 and 12-20* is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-4, 7-11, 21-32* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
           application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1.   **Claims 25-32** are rejected under 35 U.S.C. 101 as not falling within one of the

four statutory categories of invention. While the claims recite a series of steps or acts to

be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to another

statutory category (such as an article or material) to a different state or thing (Reference

the May 15, 2008 memorandum issued by Deputy Commissioner for Patent Examining

Policy, John J. Love, title "Clarification of 'Processes' under 35 U.S.C. 101"). The

instant claims neither transform underlying subject matter nor positively tie to another

statutory category that accomplishes the claimed method steps, and therefore do not

qualify as a statutory process.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   **Claims 1-3, 7, 11, 21-23, 25, 26 and 29** are rejected under 35 U.S.C. 103(a) as

being unpatentable over Perlman (U.S. Patent No. 6,813,643) in view of Rakib (U.S.

Publication No. 2002/0031120) and Hatanaka et al. (U.S. Patent No. 6,397,000).

Regarding **claims 1 and 25**, Perlman discloses a flexible subscriber video device
(SVD) configured to support playback of AV signals packetized for delivery in an AV
only transport associated with AV packets and an integrated transport associated with
AV and data packets, the SVD comprising (see figs 2a-2c):

the switch configured to simultaneously separate packets associated with the AV
only transport from packets associated with the integrated transport (col. 2, lines 50-col.
3, line 6, a switch selects a signal from two signals inputted into the switch, therefore if
two signals are being simultaneously received then clearly the switch simultaneously
selects one of the signals, thereby simultaneously switching between two signals);

a data processor in communication with the switch and configured to separate
AV related packets from data related packets included within the integrated transport
(see col. 4, lines 51-59).

However, Perlman is silent as to a demultiplexer in communication with the
switch and data processor configured to demultiplex AV packets outputted therefrom.

Rakib discloses a tuner and demodulator configured to tune to a radio frequency
(RF) carrier frequency associated with the transport and demodulate the tuned transport
for output to a switch (see paragraph 0039), and

a decoder in communication with the demultiplexer and configured to decode AV
payloads for output to a video port and an audio port (see paragraph 0083).

Therefore, it would have been obvious to a person of ordinary skill in the art at
the time the invention was made to modify the system and method of Perlman to

include a tuner and demodulator configured to tune to a radio frequency (RF) carrier frequency associated with the transport and demodulate the tuned transport for output to a switch as taught by Rakib for the advantage of payloads supplied to a decoder are always correct and is therefore useful for DVR players, optical disk players etc.

However, Perlman and Rakib fail to specifically disclose a demultiplexer in communication with the switch and the data processor configured to process AV payloads both from the separate AV packets of the integrated transport and from the AV signals of the AV only transport, wherein the AV only transport and the integrated transport are received from the switch.

Hatanaka et al. discloses a demultiplexer (fig. 1, (9)) in communication with the switch (fig. 1, (8)) and the data processor (fig. 1, (14)) configured to process AV payloads both from the separate AV packets of the integrated transport and from the AV signals of the AV only transport, wherein the AV only transport and the integrated transport are received from the switch (see col. 2, lines 30-50 and fig. 1).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the system and method of Perlman and Rakib to include a demultiplexer in communication with the switch and the data processor configured to process AV payloads both from the separate AV packets of the integrated transport and from the AV signals of the AV only transport, wherein the AV only transport and the integrated transport are received from the switch as taught by Hatanaka et al. for the advantage of receiving the audio-visual signals outputted.

Regarding **claims 2 and 26**, Perlman, Rakib and Hatanaka et al. discloses

everything claimed as applied above (*see claims 1 and 25*). Perlman discloses wherein

the AV only transport is associated with a baseline architecture (see col. 4, lines 61-col.

5, line 6, the content providers transmit multimedia content i.e. audio/video content,

MPEG2 from the head end to the end user).

Rakib discloses wherein the AV only transport is associated with a baseline

architecture (see paragraphs 0033 and 0039).

Regarding **claims 3 and 27**, Perlman, Rakib and Hatanaka et al. discloses

everything claimed as applied above (*see claims 1 and 25*). Perlman discloses wherein

the integrated transport is associated with an extended mode 1 architecture (see col. 3,

lines 41-62, MPEG2 and DOCSIS share the QAM demodulation logic, which implies

that the share the same/single stream and that MPEG and DOCSIS stream are

combined).

Regarding **claims 7 and 29**, Perlman, Rakib and Hatanaka et al. discloses

everything claimed as applied above (*see claims 1 and 25*). Rakib discloses the SVD

wherein the decoder is configured for decoding payloads compressed according to

MPEG-2 protocols (see paragraph 0057, lines 51-59).

Regarding **claim 11**, Perlman, Rakib and Hatanaka et al. discloses everything

claimed as applied above (*see claim 1*). Perlman discloses the SVD further comprising

a cable modem in communication with the processor for processing data packets (see col. 4, lines 11-23).

Regarding **claim 21**, Perlman discloses a flexible subscriber video device (SVD) configured to support playback of AV signals carried in a first or second transport, the first transport having packets with only AV payloads and the second transport having packets with AV payloads and other packets with data payloads, the SVD comprising (see figs 2a-2c):

a switch configured to simultaneously separate packets associated with the AV only transport from packets associated with the integrated transport (see col. 2, lines 50-col. 3, line 6, a switch selects a signal from two signals inputted into the switch, therefore if two signals are being simultaneously received then clearly the switch simultaneously selects one of the signals, thereby simultaneously switching between two signals);

a data processor in communication with the switch and configured to separate AV related packets from data related packets included within the integrated transport (see col. 4, lines 51-59).

However, Perlman is silent on simultaneously routing the first transport to a demultiplexer and the second transport to a data processor;

wherein the demultiplexer is configured to demultiplex the AV payloads for decoding and output as audio and video signals; and

wherein the data processor is configured to separate the AV payloads from the data payloads carried in the second transport and to output the AV payloads to the demultiplexer and the data payloads to a microprocessor such that the SVD is configured to simultaneously receive both of the first and second transport streams and to decode and process the associated AV and data payloads.

Rakib discloses simultaneously routing the first transport to a demultiplexer and the second transport to a data processor (see paragraph 0078); and

wherein the data processor is configured to separate the AV payloads from the data payloads carried in the second transport and to output the AV payloads to the demultiplexer and the data payloads to a microprocessor such that the SVD is configured to simultaneously receive both of the first and second transport streams and to decode and process the associated AV and data payloads (see paragraph 0078).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the system and method of Perlman to include simultaneously routing the first transport to a demultiplexer and the second transport to a data processor as taught by Rakib for the advantage of payloads supplied to a decoder are always correct and is therefore useful for DVR players, optical disk players etc.

However, Perlman and Rakib fail to specifically disclose a demultiplexer in communication with the switch and the data processor configured to process AV payloads both from the separate AV packets of the integrated transport and from the AV

signals of the AV only transport, wherein the AV only transport and the integrated

transport are received from the switch.

Hatanaka et al. discloses a demultiplexer (fig. 1, (9)) in communication with the

switch (fig. 1, (8)) and the data processor (fig. 1, (14)) configured to process AV

payloads both from the separate AV packets of the integrated transport and from the AV

signals of the AV only transport, wherein the AV only transport and the integrated

transport are received from the switch (see col. 2, lines 30-50 and fig. 1).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to modify the system and method of Perlman and

Rakib to include a demultiplexer in communication with the switch and the data

processor configured to process AV payloads both from the separate AV packets of the

integrated transport and from the AV signals of the AV only transport, wherein the AV

only transport and the integrated transport are received from the switch as taught by

Hatanaka et al. for the advantage of receiving the audio-visual signals outputted.

Regarding **claim 22**, Perlman, Rakib and Hatanaka et al. discloses everything

claimed as applied above (*see claim 2*). Perlman discloses wherein the baseline

architecture consists of a scheme in which MPEG AV streams are carried directly over

MPEG-2 transport and data packets are carried separately over a DOCSIS MPEG-2

transport such that different transport streams are associated with data and AV packets

(see col. 3, lines 48-59, MPEG 2 standard carries audio and video streams together

while DOCSIS standard carries audio and video separately).

Regarding **claim 23**, Perlman, Rakib and Hatanaka et al. discloses everything claimed as applied above (*see claim 3*). Perlman discloses wherein the extended mode 1 architecture consists of a scheme in which MPEG-2 AV transport packets are combined with DOCSIS data packets in a single DOCSIS MPEG-2 transport stream (see col. 3, lines 48-59, MPEG 2 standard carries audio and video streams together while DOCSIS standard carries audio and video separately).

3.   **Claims 4, 24 and 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman (U.S. Patent No. 6,813,643), Rakib (U.S. Publication No. 2002/0031120) and Hatanaka et al. (U.S. Patent No. 6,397,000) as applied to *claim 1* above, and further in view of Chelehmal et al. (U.S. Publication No. 2002/0046406).

Regarding **claims 4 and 28**, Perlman, Rakib and Hatanaka et al. discloses everything claimed as applied above (*see claims 1 and 25*). However, Perlman, Rakib and Hatanaka et al. are silent on the integrated transport is associated with an extended mode 2 architecture.

Chelehmal et al. discloses the integrated transport is associated with an extended mode 2 architecture (see cited portion, but not limited to paragraphs 0025-0028, RTP, UDP, IP and DOCSIS are being combined).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the systems and methods of Perlman, Rakib and Hatanaka et al. to include the integrated transport is associated with an extended

mode 2 architecture as taught by Chelehmal et al. for the advantage of using other real-time protocols.

Regarding **claim 24**, Perlman, Rakib, Hatanaka et al. and Chelehmal et al. discloses everything claimed as applied above (*see claim 4*). However, Perlman and Rakib are silent on wherein the extended mode 2 architecture consists of a scheme in which MPEG-2 AV transport packets in RTP payloads over UDP over IP over DOCSIS are combined with DOCSIS data packets in a single DOCSIS MPEG-2 transport stream with the ability to also use other real-time protocols instead of RTP.

Chelehmal et al. discloses wherein the extended mode 2 architecture consists of a scheme in which MPEG-2 AV transport packets in RTP payloads over UDP over IP over DOCSIS are combined with DOCSIS data packets in a single DOCSIS MPEG-2 transport stream with the ability to also use other real-time protocols instead of RTP (see paragraphs 0025-0028).

4.   **Claims 8-10, 30,31 and 33** are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman (U.S. Patent No. 6,813,643), Rakib (U.S. Publication No. 2002/0031120) and Hatanaka et al. (U.S. Patent No. 6,397,000) as applied to *claim 1* above, and further in view of Lu et al. (U.S. Publication No. 2004/0179610).

Regarding **claims 8 and 30,** Perlman, Rakib and Hatanaka et al. discloses everything claimed as applied above (*see claims 1 and 25*). However, Perlman, Rakib

and Hatanaka et al. fails to specifically disclose the decoder is configured for decoding payloads compressed according to advanced video compression (AVC) protocols.

Lu et al. discloses the decoder is configured for decoding payloads compressed according to advanced video compression (AVC) protocols (see paragraphs 0036 and 0048).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the systems and methods of Perlman, Rakib and Hatanaka et al. to include the decoder is configured for decoding payloads compressed according to advanced video compression (AVC) protocols as taught by Lu et al. for the advantage of programs coming into the set top box already compressed into MPEG-2 format.

Regarding **claims 9 and 31**, Perlman, Rakib, Hatanaka et al. and Lu et al. discloses everything claimed as applied above (*see claims 8 and 30*). Lu et al. discloses the AVC protocols are associated with MPEG-4 (see paragraph 0054).

Regarding **claims 10 and 32**, Perlman, Rakib, Hatanaka et al. and Lu et al. discloses everything claimed as applied above (*see claims 8 and 32*). Lu et al. discloses the AVC protocols are associated with H.264 (see paragraph 0054).

Conclusion

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to NNENNA N. EKPO whose telephone number is

(571)270-1663. The examiner can normally be reached on M-F.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Brian T. Pendleton can be reached on 571-272-7527. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

        Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nnenna Ekpo/
Patent Examiner
December 2, 2009.

/Hunter B. Lonsberry/

Primary Examiner, Art Unit 2421